



Implementation Tools **6**

Chapter 6: Implementation Tools

INTRODUCTION

There are numerous techniques available for communities to reach their open space goals. This chapter organizes them into four main types. The first, Open Space Acquisition, is the outright purchase or procurement of lands for preservation purposes. Private Land Protection, the second, involves protecting privately owned lands through incentives. The third type, Green Development and Redevelopment, involves protecting and conserving land through sound development and redevelopment practices. This includes sound land stewardship and methods to enhance environmental qualities of both protected and unprotected open spaces, in undeveloped as well as developed areas. The fourth category consists of various funding techniques to reach community open spaces and recreation goals.

OPEN SPACE ACQUISITION

Open space acquisition is the procurement of land for preservation or public use by public agencies and/or a land conservancy. There are several common mechanisms for the acquisition of open space land, such as fee simple purchase, easements, and donations. They can be used separately or in combination with other techniques listed below to facilitate acquisition.

FEE SIMPLE ACQUISITION

The most effective means of preserving land is through fee simple purchase. Fee simple ownership gives the owner complete control of the land, including all public access and conservation practice decisions. However, fee simple acquisition, particularly purchases at market value, can also be the most expensive. Therefore, many entities interested in land preservation, particularly public agencies or land conservancies with limited budgets, will explore more creative options to acquire open space.

Purchase at Market Value

Purchasing open space at market value is often the most expensive option to acquire open space. As with other fee simple acquisition methods, the purchaser gains complete control of the land. However, the purchase price is typically dictated by market trends, desirability, and land availability in the immediate area. This method is most often used when the seller does not have an incentive or a personal motive to conserve the land.

Bargain Sale

A bargain sale involves the sale of land, at a reduced price, to a municipality or land conservancy by a conservation-minded landowner. The landowner's main motivations for this type of sale include the tax benefits that may be associated with "donating" the difference between the market value of the land and the commercial selling price. This enables a municipality to acquire open space acreage at less than the market price. The municipal solicitor should be contacted for more information regarding the mechanics of such a sale, as well as any potential tax benefits in a particular municipality.

Life Estate

A conservation-minded landowner can donate or will property (or rights thereon) to a municipality or conservation organization upon death or other specified condition, after which the land (or rights)

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reverts to the municipality or organization. The landowners and heirs benefit from reduced taxes because another party has legal ownership or interest in the property, and the owner is assured that the land will be used in perpetuity for open space purposes. In some cases, public access is granted for recreational trails on the property while the landowner is still alive.

PURCHASE AND LEASEBACK OR RESALE

An entity interested in preservation, such as a local government or a conservancy, can purchase land in fee simple, place restrictions on the deed prohibiting certain uses (e.g., residential development), and resell or lease the land to an interested party. The original buyer gains the potential for future use at the current price and may recover some or all, of the purchase price through leasing. The land is maintained in open space and may be developed as a park if and when future demand warrants.

Resale of some or all of the land with deed restrictions may maintain open space levels, relieve the municipality of maintenance obligations, and return the land to the tax rolls. A variation of this technique is possible at the County level when tax-delinquent land parcels become temporary property of Delaware County. For example, the County government might prefer to transfer a parcel in the greenway to the municipal government or other entity, but would first guarantee its preservation by placing a conservation deed restriction upon it.

DONATION

Land or an easement on the land is frequently donated by a private owner, organization, or corporation. Local governments should encourage land donations by pointing out benefits of such actions, including possible federal income and estate tax benefits and public relations value. Prior to accepting a donation, a municipality should consider the location of the parcel and the anticipated development and maintenance costs. If the location is poor and/or projected management costs appear to be excessive, the municipality should strongly consider whether or not to accept the land. In addition to land, corporations and other private parties also frequently provide cash donations for worthy causes, including land preservation.

EASEMENTS AND DEED RESTRICTIONS

Conservation Easements/Deed Restrictions

An easement is a mechanism by which a municipality or conservation organization can obtain a legal interest in private land for public use or conservation purposes. Conservation easements place restrictions or an outright prohibition on development at a lower cost than fee simple acquisition. Under a conservation easement, land remains in current ownership, but the property owner voluntarily agrees to donate or sell one or more rights attached to the land. In the case of a conservation or access easement, it would be the right to develop the land. Furthermore, a conservation easement may also provide the property owner with federal income tax and estate tax benefits. For example, easements may be placed on historic lands or buildings, open space, forests, or farmland. Conservation easements are frequently used for environmental preservation without providing for public use of the land. The easement can be held by a municipality, county, or a private conservancy, such as Natural Lands Trust or Brandywine Conservancy, both of which is headquartered in Delaware County.

Deed restrictions are legally recognized “conditions” placed on all or a portion of public land for a specific purpose. The deed restriction becomes binding on all future owners of the land. It can describe nearly any condition of the land, from certain uses to constricting development.

Public Access and/or Trail Easements

A conservation easement can also be combined with a *pedestrian easement* or *right of public access easement* to allow public access for walking, hiking, horseback riding, bicycling, fishing, and other activities. The easement language typically establishes rules and restrictions, such as limiting when, where, and how the easement may be utilized. PA Act 68, Recreational Use of Land and Water Act (RULWA), assures that the landowner is not held liable for any injuries, crimes, or death associated with public use of the land.

Other Easements

Joint-Use Easement

Electric transmission lines, sanitary sewer lines, and petroleum or gas pipelines have utility easements for their uses. There are opportunities to use these corridors for trail connection, as they contain a cleared pathway. A joint-use easement allows multiple uses under one easement. Municipalities can look for opportunities to enter into joint-use agreements.

Agricultural Conservation Easement

Agricultural conservation easements acquired through state or county programs may be appropriate for the protection of prime farmland. Agricultural conservation easements can help to preserve important soils and helps to maintain the scenic character of the agricultural landscape. Such a program involves the purchase of development from owners of prime farmland if the owner agrees to keep the land in agricultural use. The land must meet certain acreage, soil, and production criteria to qualify for the program. Additional information about agricultural conservation easements is available from the Penn State Cooperative Extension. Delaware County does not have its own program; however, two of its municipalities participate in the state program. For more information, refer to the Agriculture Security Area discussion in the following section on private land protection.

Resources

The Pennsylvania Land Trust Association (PALTA) is the statewide coalition of nonprofit land conservation groups. PALTA has developed model easements and agreements that are available on the association's website (<http://www.conserveland.org>). They include:

- Pennsylvania Conservation Easement
- Trail Easement Agreement
- Water Quality Improvement Easement
- Riparian Forest Buffer Protection Agreement
- Fishing Access Agreement

EMINENT DOMAIN

When land for open space or trails cannot be obtained through negotiated fee-simple purchase or easement, a governmental entity (municipality, county, or other) can exercise its right to use eminent domain as a means to acquire land for public purpose. Eminent domain involves condemnation proceedings to acquire land in exchange for “just compensation” from an unwilling seller. The just compensation is usually a dollar amount equal to the fair market value of the condemned land. The condemner must pay all associated costs for acquisition. Eminent domain can be an effective tool for land acquisition; however, it is the acquisition method of last resort.

PRIVATE LAND PROTECTION

There are a number of programs that private property owners can pursue. They have differing degrees of protection and permanence. Tax incentive programs and easements are some of the most common practices used for private land protection.

AGRICULTURAL SECURITY AREAS

The Pennsylvania Agricultural Area Security Law (PA Act 43 of 1981) allows for the establishment of agricultural security areas (ASAs). ASAs are intended to promote permanent and viable farming operations over the long term by strengthening the farming community's sense of security in land use and the right to farm. They are created by municipalities in cooperation with individual landowners who agree to collectively place at least 250 acres in an agricultural security area. The Law allows for the creation of joint municipality agricultural security areas. The ASA is reviewed every seven years; however, new parcels of farmland may be added to an established ASA at any time.

Under the law, a municipality, or group of contiguous municipalities, agree not to pass nuisance ordinances that would restrict normal farming operations. Limitations are placed on the ability of government to condemn farmland located in an agricultural security area for new schools, highways, parks, or other governmental projects.

Having land enrolled in an agricultural security area does not restrict a landowner's ability to use his or her property for non-agricultural development purposes. Landowners who are part of a 500-acre or larger agricultural security area are eligible for consideration to apply to sell an easement (development rights) under the state's Easement Purchase Program, through the local county's agricultural preservation program.

Eligible Properties must be: 1) noncontiguous farm parcels that are at least 10 acres in area; 2) properties made up of viable agricultural land (cropland, pasture, and woodland can all be included in an ASA); 3) properties with at least 50% of the land in Soil Capability Classes I-IV as defined by the county soil survey; 4) zoned to permit agricultural uses.

ASA's currently exist in Edgmont and Concord Townships. Municipalities interested in forming an ASA should contact the Delaware County Conservation District to discuss program requirements. Agricultural security areas are most relevant to the Growing Suburbs as they contain more agricultural land.

PRIVATE LANDOWNER CONSERVATION INCENTIVE PROGRAMS

Preferential assessment programs (i.e., Act 515 and Act 319) can be valuable tools for open space preservation. They involve a property owner signing a covenant (agreement) not to change the land use from open space, farm, forest, etc. in exchange for a reduced tax assessment. Therefore, development is limited for the life of the agreement on the property. In the meantime, the landowner retains ownership and maintenance of his or her land. However, the protection that these programs provide should not be considered permanent. High land values can affect a property owner's decision to leave the program after the agreement expires, or it may offset the tax penalty for breaching the program. Both programs have a minimum 10-acre requirement, and parcels under a single covenant must be contiguous and held in common ownership. As such, both programs are most relevant to communities in the Growing Suburbs.

PA Act 515 (PA Assessment of Open Space Covenant Act – 1966)

Act 515 enables counties to offer preferential tax assessment on land that is used for open space, farmland, forest land, or water supply land (per a minimum acreage requirement). The landowner covenants with the County for a reduced assessment for a period of 10 years (with an automatic yearly renewal thereafter). If the covenant is breached, the landowner must pay roll-back tax penalties to all taxing districts. In Delaware County, the Act 515 Open Space Covenant program is administered by the County Planning Department.

PA Act 319 (PA Farmland and Forest Land Assessment Act – 1974)

Act 319 enables counties to offer preferential tax assessment on land based on the agricultural use value of the land according to the productivity of the soil. Act 319 can be applied to farmland or forest land (per minimum acreage and agricultural income requirements). The landowner covenants with the County for a reduced assessment, subject to terms of the County Board of Assessments and based on soil productivity. If the covenant is breached, the landowner must pay roll-back tax penalties to all taxing districts. In Delaware County, the Act 319 program is administered by the Delaware County Board of Assessments.

GREEN DEVELOPMENT AND REDEVELOPMENT

Green development and green redevelopment are broad techniques that focus on sustainable development patterns and design to address environmental, economic, and social concerns. The principles behind green development are applicable to both new development and redevelopment, with a focus on sustainable use or reuse of land resources using smart growth concepts.

Green Development

Green development practices are important to take into consideration when developing previously undisturbed areas. Many undeveloped lands contain significant old growth forested area which can be fragmented by development, reducing the amount of core habitat. In woodlands, as well as agricultural areas, natural soils and steep slopes are extremely sensitive to disturbances, which can easily cause them to lose their integrity and environmental value. Altering the natural processes significantly affects the water regime of the site. The extension of infrastructure to serve previously undisturbed areas can affect surrounding sites and beyond. Utilities such as sewerage, for instance, may require earth disturbance over long distances to connect to a site.

Green Redevelopment

The considerations for redevelopment sites are much different than for new development. Redevelopment provides an opportunity to improve sites that were previously developed without green development practices. Decreasing impervious surfaces, increasing vegetation, and introducing on-site stormwater management are emphasized. Redevelopment sites are also already served by public infrastructure, requiring less neighboring land disturbance and lower development costs. Where important natural resources are still intact, green development practices should be implemented to preserve their environmental values.

SMART GROWTH

The concepts of green development and redevelopment are also significant components of what is commonly referred to as 'Smart Growth.' Smart Growth covers a range of development and conservation strategies that help protect our natural environment and make our communities more attractive, economically stronger, and more socially diverse. It is about building and developing

communities that positively impact residents' lives (United States Environmental Protection Agency 2013).

The basic principles of Smart Growth include:

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions
(United States Environmental Protection Agency 2013)

These ten basic principles can help inform decision- and policy-making at the municipal level in order to facilitate green development and redevelopment.

PENNSYLVANIA MUNICIPALITIES PLANNING CODE

In order to facilitate green development and redevelopment, municipalities should take proactive steps to guide future development through planning and implementation using a variety of tools. The Pennsylvania Municipalities Planning Code (MPC), PA Act 247, as amended is the enabling legislation that authorizes municipalities to plan for and zone land within their boundaries. It is the rule book that sets the standards for land use planning documents, such as county and municipal comprehensive plans, zoning ordinances, subdivision and land development ordinances, and official maps. These land use planning documents and tools can help municipalities to set green development and redevelopment objectives and guide development accordingly.

Municipal Comprehensive Plan

As defined by Act 247, a municipal comprehensive plan "shall include, but need not be limited to, the following related basic elements:

- (1) A statement of objectives of the municipality concerning its future development, including, but not limited to, the location, character and timing of future development, that may also serve as a statement of community development objectives as provided in Section 606.
- (2) A plan for land use, which may include provisions for the amount, intensity, character and timing of land use proposed for residence, industry, business, agriculture, major traffic and transit facilities, utilities, community facilities, public grounds, parks and recreation, preservation of prime agricultural lands, floodplains and other areas of special hazards and other similar uses." (Pennsylvania Municipalities Planning Code, PA Act 247 1968, as amended)

The public participation and input required for preparation of municipal comprehensive plans make their objectives both informative and useful. The comprehensive plan can identify goals specific to green development and redevelopment, and can identify not only locations and intensity for development, but also desired uses including parks and recreation, and land preservation. It should be noted, however, that a comprehensive plan is only a vision document for a municipality. In order to implement the plan,

a municipality must adopt zoning and subdivision and land development ordinances, where appropriate, as well as through use of an Official Map and other special purpose local ordinances.

Zoning and Subdivision and Land Development Ordinances

One of the easiest ways to protect environmentally sensitive land is through a municipal zoning ordinance, subdivision and land development ordinance (SALDO), or other free-standing ordinance. Put simply, zoning ordinances define what land uses are allowed in specific locations, while a SALDO defines how these uses may be built or developed. These and other local ordinances are the legally enforceable measures that support implementation of a municipality's comprehensive plan. Local ordinances contain provisions that permit, prohibit, or define standards for development on or near environmentally sensitive areas. Performance standards, which describe an end result rather than a method, are frequently included in ordinances. The following provisions are often used with regard to green development and redevelopment.

Performance Standards

A performance standard identifies the end result rather than defining a particular method to achieve the standard. The standard sets a minimum requirement or maximum allowable limit on the effects of a use or measurable or identifiable effect such as, but not limited to, noise, vibration, smoke, or odor. Such standards are placed on individual uses in the zoning code, and allow the alteration of zoning or subdivision standards to achieve a desired form of development and protect the public from dangerous or objectionable elements. Examples of a performance standard may require screening or an open space buffer between a noisy, odorous, or unsightly development and a residential area.

Open Space Requirements

The preservation of open space as part of the development process can be facilitated with provisions in the zoning ordinance and SALDO. Open space development provisions are often modifications to existing lot size requirements in each zoning district (e.g., Low Density Residential District: 1.0 acre minimum lot size or 0.60 acre with 40% open space), or a SALDO provision requiring a riparian buffer or replacement of trees.

Mandatory Dedication of Open Space or Fee-in-Lieu Thereof

The Pennsylvania Municipalities Planning Code enables municipalities to require developers dedicate land, or fees-in-lieu of land, for public recreation. Municipalities must have an adopted recreation plan and an adopted ordinance relating to mandatory dedication before land or fees can be accepted. The amount of land required must be related to the demand for recreation land typically created by new development. The required land dedication should be in addition to the preservation of natural features on the land, such as floodplains, wetlands, steep slopes, woodlands, or other sensitive areas. Several municipalities in Delaware County, including Aston, Chadds Ford, Concord, Edgmont, Haverford, Middletown, Newtown, Radnor, Springfield, and Thornbury Townships, and Chester Heights Borough, have open space/fee-in-lieu ordinances.

Conservation Design/Conservation Subdivision

Also referred to as open space development or "cluster development," conservation subdivisions are very useful for preserving sensitive environmental features, vistas, historic/cultural resources, and greenways. When a tract is developed using conservation design, increased density is sometimes allowed in exchange for mandatory preservation or dedication of open space. As an example, under standard suburban development configurations, a 100-acre lot adjacent to a stream might be subdivided into 100 one-acre lots. Under conservation design:

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- The natural features of the site are identified and preserved first (10 acres, for example).
- Open space is then set aside near the stream (40 acres, for example).
- The remaining area is subdivided into the 100 lots originally allowed under conventional zoning, but the lots are only 0.5 acres each.

PRDs and PUDs

Planned residential developments (PRDs) or planned unit developments (PUDs) are large-scale development projects that permit a variety of types of uses on the same tract of land. A PUD is developed as a unit under single ownership or unified control. Its design is regulated under the PRD or PUD provisions of a municipal subdivision and land development ordinance. It is developed as a single unit rather than as an aggregate of individual lots, allowing for design flexibility from traditional siting regulations or land-use restrictions. This greater flexibility makes it possible to include open space as one of the required uses. PRD provisions most often include performance standards as well as numerical standards for area, bulk, and open space.

Negotiated Improvements

Negotiation is a bargaining tool, often used in conjunction with zoning or SALDO provisions involving the use of waivers, the alteration of minor zoning requirements in exchange for desired improvements, increased open space, etc.

Other Ordinances for Environmental Protection

Riparian buffers are the areas within a specified distance from a waterway within which a planted area serves to protect, or “buffer,” the water body from excessive runoff and/or pollution/sedimentation. Riparian buffer widths are dependent on the reason or goal for the buffer. The buffers often range from 50-100 feet wide. The most appropriate buffer size depends on the size of the stream, its location within a watershed (e.g., headwaters), and the existing natural and human-built features along the stream. A two-tiered buffer can set different standards for setbacks depending on proximity to the stream (e.g., no development within 100 feet, and no mowing within 50 feet).

Floodplain regulations restrict development and certain other activities within the 100-year floodplain, frequently in a separate floodplain ordinance. State floodplain regulations represent a bare minimum of floodplain protection, and require, at a minimum, elevation and floodproofing of structures and contain provisions regulating storage of hazardous materials. Ideally, all floodplains should be kept in open space; however, that is not always possible. Activities such as tree-cutting and clearing of vegetation can negatively affect floodplain function and should be prohibited or restricted. Improvements to existing structures in the floodplain are also required when other substantial improvements are made.

Wetlands, high water table soils, and hydric soils are areas containing permanently or frequently saturated soil conditions, standing water, or specific wetland indicator plant species. True wetlands must contain all three wetland parameters. Wetlands are currently regulated at both the state and federal levels. As such, they are most often not regulated at the municipal level. However, many zoning ordinances/SALDOs recognize the need for their protection by requiring wetland delineation to be performed by a qualified wetland as delineated by a qualified wetland specialist, and require proof of any necessary regulatory permits prior to final approval of the plan.

Steep slopes are usually divided into two categories: 15–25% (steep slopes) and 25% and greater (very steep slopes). Development densities and buildings sites are typically restricted on slopes between 15 and 25 %, and restricted or prohibited on slopes 25% and greater. Restricting development on steep slopes helps to prevent erosion by preserving vegetation that maintains the structural integrity of the slope, while also preserving open space. Twenty-one of the 49 municipalities in Delaware County have adopted a steep slope ordinance.

Woodlands – Most SALDOs contain provisions regulating tree-cutting, which often require replacement of trees removed as part of the development process. Identifying a maximum percentage of trees that may be removed *per lot* is another, more protective option. Cutting restrictions can also be placed on floodplain forests and upland forests, respectively, to protect woodlands along stream corridors and ridges.

Agricultural zoning – “Effective agricultural zoning” limits the amount of development on key prime farmland tracts so that most of the land remains in large lots, allowing them to remain more viable for farming. Agricultural zoning must consider soils, physical features, current land use patterns, and other matters. Limiting water and sewer extensions and transfer of development rights may also help to conserve farmland. Radnor Township has an Agricultural Conservation zoning district on its major farmland and golf course areas; however, detached residences are still one of the permitted uses, with a required minimum lot size of two acres.

Official Map

An official map is a map and ordinance identifying lands needed for existing and/or future public projects within the municipality in order to meet objectives from an official municipal plan. Authority for an official map is provided in Article IV of the Pennsylvania Municipalities Planning Code (Act 247, as amended). The official map can be used to reserve a right-of-way which can be very useful to a municipality for trail development, easement acquisition, or other negotiations with developers. Preferably, when a greenway plan is adopted, the proposed greenways should be put on a municipal official map, which would be adopted by the municipality. If a development is proposed on a parcel where a greenway is proposed, the municipality has one year to acquire control of all or a portion of the parcel, or negotiate other arrangements in accordance with local policies prior to development of the parcel.

Land on an official map can be reserved without immediate purchase, giving the municipality time to set aside funds for future acquisition. Having an adopted official map allows a municipality up to 12 months to acquire property or begin eminent domain proceedings, after a property owner gives notification of his intentions to build on, subdivide, or otherwise develop the land identified on it. It can also provide leverage for outside funding as it indicates municipal commitment to purchase land and/or make improvements. Funding agencies are more comfortable supporting projects that are part of a well-thought out strategy that has the community’s support.

It is important to note that an official map is not zoning; nor does it place landowners in jeopardy of having land taken away, or imply municipal responsibility for opening, maintaining, or improving the identified property.

Transfer of Development Rights

Transfer of development rights (TDR) is a zoning tool that can help to facilitate the preservation of environmentally sensitive land. Under a typical TDR system, development rights from an area to be protected can be transferred to another parcel of land more suitable for intense development. The developer receives approval to build on the development parcel at a higher density than would be allowed without the additional development rights from the preserved parcel.

The developer and the owner of the sensitive land privately negotiate a price. The municipality approves the higher density development, and, simultaneously, a conservation easement is placed on the sensitive land. Municipalities may adopt a transfer of development rights program across municipal boundaries within a multi-municipal planning region. This could enable owners of undeveloped land to sell development rights to developers for use in another municipality within the region, thereby relieving pressure on rural lands or greenway lands and helping to sustain developed areas.

TDR has never been put into practice in Delaware County, but Concord Township does have an adopted TDR ordinance.

Other Techniques

Land Swaps or Land Exchanges

Land swaps or land exchanges are useful when a development interest and a conservation interest both own a piece of land more appropriate to the mission of the other. For example, a residential developer may own a wetland area next to a park while a municipal government owns a vacant tract near an existing developed area. With the land exchange, the environmentally sensitive land is preserved by the municipality and the developer builds in an appropriate location. Any mismatches in land value can be negotiated.

“Good Neighbor” Agreements

“Good neighbor” agreements between a developer and municipality may result from negotiations. In this case, the developer adds some sort of improvement or conservation measure to the site as a way of maintaining good relations with the community or municipal government.

MUNICIPAL OPEN SPACE PLAN

A municipal open space plan can be a stand-alone document or serve as the open space component of a comprehensive plan. Similar to the comprehensive plan discussed above, it sets a vision for a municipality’s land specific to open space and recreation. Many municipal open space plans also contain a greenway component. The open space plan is intended to guide municipal policy regarding open space and recreation. It can be used to help determine further land use and open space protection strategies. Municipal open space plans typically include an inventory and analysis of existing open space and recreation in the municipality and identify needs and opportunities that align with the comprehensive plan and forecasted population changes. Completing a municipal open space plan is a vital step in identifying specific needs and opportunities for municipalities looking to guide green development and redevelopment efforts.

LAND STEWARDSHIP

The protection of open space is vital for the protection of natural resources. Sound land stewardship is a mechanism by which municipal officials and residents in both the Growing Suburbs and Mature

Neighborhoods can undertake ongoing efforts to protect and preserve their resources through better management. The techniques apply not only to large tracts of preserved land, but also to smaller privately owned lands and common spaces.

Growing Suburbs have opportunities to focus their efforts on maintaining natural features on municipal or conservation organization protected lands, and encourage stewardship on private property and HOA land. Sustaining the natural qualities of environmentally sensitive land requires active intervention by the landowner due to the pressure from continuous development surrounding many of these parcels. A stewardship plan is often developed to determine the necessary amount and type of intervention required, particularly on large properties.

In addition to maintaining preserved open spaces, Mature Neighborhoods and Central Places (e.g., Downtown Media) should emphasize reintroducing natural resources into the community. This is often referred to as “regreening.” Community efforts can vary widely in scale, from street tree planting to riparian corridor restoration. The concentration of these efforts is bringing the environmental benefits of green spaces back into developed areas, emphasizing enhancement of landscaping and connecting small open spaces. Many regreening projects occur along commercial thoroughfares as an economic development project to improve the aesthetics of the area.

Natural Lands Stewardship

Natural lands stewardship is the management of land in a manner that conserves and enhances the natural features that are found on the site. It may include forest or meadow management or a reforestation strategy. One of the first steps in natural lands stewardship is developing goals for the lands that address the unique features and challenges. The goals should consider adjacent land uses and set realistic expectations. A land management strategy should then be developed which identifies specific techniques, locations, and participants to reach the identified goals.

Natural Lands Trust, based in Media, is a tremendous local resource for information on natural lands management techniques and assistance. The organization published *Land for Life – A Handbook on Caring for Natural Lands* (2014) as a resource for landowners, both private and public. The document provides step-by-step instructions for stewarding lands in a natural setting.

Another great local resource in Delaware County is the Brandywine Conservancy, located in Chadds Ford. The Conservancy focuses conservation efforts in the Brandywine River watershed and surrounding areas, with an emphasis on conservation of water quantity and quality. As part of this effort, the Conservancy offers land stewardship programs to help create and implement conservation plans. For more details on Brandywine Conservancy, visit <http://www.brandywineconservancy.org/index.html>.

Common Challenges

Due to the County’s historical development patterns and current development pressures, it faces many challenges that threaten the natural resources. According to *Land for Life*, the four major challenges are:

Fragmentation/Edge Effects

Remaining forests in this region are isolated patches of former contiguous woodlands, which create large areas of “edge” type forest ecology. Many plant and animal species require the microclimate found in core habitat to survive. Landowners should work to create connections between forested patches.

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Deer Overabundance

The lack of natural predators in this region has led to an increase in deer population to the point of overabundance. It is a burden on the ecosystem because deer consume shrubs and small trees in large quantities, thus limiting growth, particularly of understory, in forested areas. Maintaining deer population at an appropriate level is a priority for landowners in suburban environments.

Invasive Plants

Invasive plants are a threat to the ecosystems of this region because they compete with native plants for resources such as sunlight, water, and space. Developing a management strategy for invasive plants will help diverse native ecosystems thrive.

Water Quality

Development patterns have increased stormwater runoff quantity, while simultaneously reducing the quality. It is important for landowners to maintain land cover. This is particularly true for riparian buffers, which helps to protect the water bodies from pollution and increase infiltration

(Natural Lands Trust 2014).

REFORESTATION

As discussed in Chapter 2: Natural Features, and reinforced by the American Forests Ecosystem Analysis for the Delaware Valley, tree canopy cover contributes greatly to quality of life in an area. For this reason, the County and municipalities should look for opportunities to protect wooded areas, while reforesting others. Depending on the location in Delaware County, the most effective approaches to woodland protection or reforestation will differ. As such, municipalities should develop a personalized strategy that takes into account the specific development patterns and trends of the municipality. For most municipalities in Delaware County, it will require the dual commitment of limiting tree canopy loss and reforestation.

Limiting Tree Canopy Loss

The Growing Suburbs of Delaware County still contain areas of dense tree canopy on a number of parcels. These areas are important not only for their environmental functions, but also for the neighborhood character they provide. Therefore, the County encourages municipalities to take steps to protect tree canopy and forested areas. One of the most comprehensive approaches to limiting tree canopy loss involves the use of municipal ordinances to protect densely wooded areas and/or require tree replacements for trees cleared. Municipalities have the legal authority to encourage and/or require development be conducted in a sustainable manner, such as through conservation by design and smart growth practices, which emphasize the protection of tree cover. Municipal shade tree ordinances can also help to protect shade trees as an asset to and an important characteristic of the municipality. Shade tree ordinances establish requirements and processes for the maintenance, removal, and replacement of trees within a municipality. The replacement ratios are based on the diameter at breast height of the trees removed, and require a specific number of replacement trees of a certain size according to the determined ratio.

Reforestation

Reforestation is most likely the most appropriate approach in the Mature Neighborhoods of Delaware County. Open spaces and greenway areas can also benefit from considerable reforestation, and can

Important Planting Considerations

Select trees that are appropriate for the site to avoid incompatibility with surrounding landscape.

Choose native trees that are adapted to the local climate to limit the need for additional watering.

Plant salt tolerant trees along roadways and parking lots that can withstand salt sprayed on the roadways during the winter months.

Avoid planting tall shade trees in close proximity to aerial utilities.

Plant a diversity of tree species to help promote resiliency. A street lined with trees of the same species is susceptible to being completely wiped out if a disease infects them.

Always call PA One Call at #811 (www.pa1call.org) to identify underground utilities before digging.

The above tips are intended only as general guidelines. Always consult with a certified arborist or other qualified professional when planning tree plantings.

serve as environmental focal points for the surrounding areas. When considering reforestation, there are several approaches a municipality may take. These include everything from establishing a shade tree commission to advise municipal officials, to forming volunteer groups that can help maintain and plant trees.

Shade Tree Commission

Shade tree commissions are created by municipal ordinance and are intended to advise community leaders/staff on administering the community forest, assist in organization of tree planting and maintenance, and develop forest inventories, management plans, and ordinances. Municipalities often task the shade tree commission with review and comment on development plans that propose removal of large quantities of trees. Twenty-six municipalities in Delaware County have shade tree commissions.

Tree City USA

Tree City USA is a national program run by the Arbor Day Foundation. It provides a framework for a community to manage its forestry program. In order to be considered a “Tree City USA” municipality, certain criteria must be met. The municipality must have a tree board or department (e.g., shade tree commission), a tree care ordinance, which sets policies for the community forestry program, a community forestry program with specific budget requirements, and an Arbor Day celebration. As a member of this program, municipalities receive education and strategic advice and standards from Tree City USA when developing their community forest strategy. As of fall 2014, 11 municipalities in Delaware County are Tree City USA members.

Community Forestry

Community forestry depends heavily on the involvement of area citizens. It requires close coordination with volunteer groups of all ages, ranging from school-aged children to senior citizens. Encouraging involvement leads to a greater understanding and respect for the issue of tree cover, while also creating a community with a vested interest in the protection and growth of the tree canopy. Community forestry benefits significantly from advertising community events such as tree plantings and Arbor Day celebrations. Efforts often include memorial tree funds, where relatives/friends can donate trees in memory of loved ones. Adopt-a-tree/street programs, where a group or company can sponsor tree(s) on a street or other area, are also popular. Continued public outreach and education not only leads to more awareness of the issue, but also to greater opportunity and incentive to partner with local businesses that can provide donations in the form of materials or labor.

Multi-Municipal Partnerships

Municipalities can work together toward common goals, particularly

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along Activity Corridors that cross jurisdictional boundaries. For instance, municipalities along an activity corridor can work together to identify objectives and approaches to increasing tree canopy cover. A main component of this could be the planting of street trees to provide a buffer for the commercial businesses, while providing shade for pedestrians. With a multi-municipal approach, costs can be reduced by purchasing trees, tools, and other materials in bulk quantities. For a broader discussion regarding landscaping of activity corridors and streets, see the Green Streets section below.

Post-Planting Program

An important consideration when developing and implementing a municipal tree planting program is the post-planting care required. Trees planted in more natural settings do not require as much monitoring and maintenance as trees planted along busy streets and pedestrian corridors. In natural areas, the trees should be checked regularly for damage from deer. Street trees, however, need to be pruned and maintained to keep a clear distance above the roadway and sidewalks/pathways. In particular, newly planted street trees should be pruned regularly to set desired, upright growth habits. Regular pruning of young trees helps to establish the desired branching patterns that may limit the amount of future pruning required. Regular pruning of mature trees should include the removal of dead/dying branches as a precautionary measure. In both natural and urban settings, trees should be watered regularly. Trees that present a significant hazard should be removed as quickly as feasible for public safety, particularly in high-traffic areas.

Establish Goals

When developing a municipal or community forestry program, municipalities should set a clear goal for tree cover. American Forests recommends 40% tree cover for urban areas in Delaware Valley. Since Delaware County is the second most densely populated county in the state, this goal may not be feasible for each municipality. Achievable goals will vary across the County, depending on degree of existing development. The increase in coverage can be achieved at a number of locations, including tree plantings in parks, along street rights-of-way and in riparian buffers. See the Chapter 2: Natural Features for examples of protection and reforestation efforts in Delaware County.

Prioritize Focus Areas

In order to achieve their desired goals, municipalities should identify specific areas where tree canopy cover can be a focus. See the examples discussed in Chapter 2: Natural Features for information on tree planting efforts in various areas. A common example of a priority area for tree plantings is along streets where the trees can buffer views of parking lots and provide shade for pedestrians. Parkland is an ideal location to emphasize municipal tree plantings because the land is owned and maintained by the municipality. Focusing initial municipal tree planting efforts around primary paths and parking lots in parkland can have a tremendous impact on the user experience. Riparian buffer areas are very important sites for tree planting as stream banks are generally unsuitable for development. Additionally, planting and protecting trees in riparian buffers can help to reduce flooding and pollution from stormwater runoff, and stabilize the stream banks to prevent sedimentation in streams. As such, municipalities should take the benefits that trees provide into consideration when developing a reforestation strategy.

LAND REUSE

Vacant or underutilized land owned by a municipality or redevelopment authority provides opportunities for Mature Neighborhoods to introduce a pocket park or urban garden as part of a strategy to re-green/improve a community.

Pocket Parks

Development of pocket parks is one of the most effective methods for Mature Neighborhoods and Central Places to increase greenspace and provide recreation opportunities. Many pocket parks began as vacant lots that were maintained by local residents who began to clean up lots and use them for various activities. There are several approaches to developing pocket parks. Municipalities can either purchase the land or they can convert vacant land acquired through tax sale (a very cost effective way to increase the amount of open space). Community members and non-profits can come together to apply for funding to develop and maintain unused lands in their neighborhoods. Municipal leaders can provide technical and/or financial support to help these residents construct and maintain pocket parks. Other ways municipal officials can encourage pocket parks include limiting barriers to community gardens and keeping a dialogue open with community residents.

Urban Gardening and Urban Agriculture

As discussed in Chapter 3: Open Space Land Resources, urban gardening/agriculture provides a great opportunity for communities to reintroduce diverse landscapes into developed areas. Turning vacant parcels or areas of lawn into urban gardens makes productive use of land that would otherwise have limited environmental value. Regional and local studies have recognized the values urban gardening can provide communities, such as local food sourcing and educational outreach. There are various challenges to urban gardening, including dealing with compacted or poor soil, but this obstacle can be overcome.

Regional Studies

Municipalities should continue to participate in regional studies examining urban gardening and food systems, such as the *Greater Philadelphia Food Study*, developed by the Delaware Valley Regional Planning Commission in 2010. Regional studies provide significant benefits to municipalities in that they typically show trends, case studies, and best practices to be considered when planning for urban gardens.

Comprehensive Plans

One of the best approaches to promoting urban gardens is to identify them as a community asset in a municipal comprehensive plan. Urban gardening can be used as the centerpiece of a larger sustainability plan or serve a local food agenda goal. After identifying potential locations, types, and scale of desired urban gardening in the comprehensive plan, a municipality will have a sound basis for implementing its goals.

Zoning Ordinances

A barrier that urban gardening regularly faces is that it is often not recognized as a legitimate land use in zoning ordinances. In order to implement urban agriculture as outlined in a comprehensive plan, a municipality should adjust its zoning code and designate agriculture as a permitted use. Further, municipalities can list community gardens as a desired amenity within existing zoning, districts such as planned unit development, traditional neighborhood development, and conservation subdivisions. When promoting urban gardening through zoning, municipalities should carefully consider the appropriateness and desired amount of urban gardening within a community.

Other Ordinances

Many municipalities have ordinances that can affect urban gardening. For example, many communities have ordinances that do not permit residential composting due to concerns relating to odors and insects. Thanks to research and consumer product advancements, many best practices for residential

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composting reduce these concerns. In order to promote urban gardening and the productive use of smaller urban spaces in certain areas, municipalities can amend ordinances to permit residential composting provided the composting process meets or exceeds preset standards of best practices identified in the ordinance.

Municipal Parks

Several parks in Delaware County have specific areas for community gardens. Garden plots are designated and leased to community members for a small fee; the renter uses and maintains the plot for gardening purposes. A local example of this can be found at Rose Tree County Park.

Other

Municipalities can encourage the use of vacant lands for urban gardening as an interim use. Public-owned vacant lots can be used on an interim basis to help maintain and contribute to local beautification efforts, as well as to help reduce crime.

Utility rights-of-ways often have planting restrictions, particularly with regard to heights and root zones. However, due to the amount of space in these rights-of-way, portions of many can be used for urban gardening. Lands owned and maintained by HOAs can also be used more productively. Often, these spaces buffer developments from roadways and are typically large spaces of open lawn. HOAs can work with community groups and residents to identify portions of HOA lands that can be leased out to interested parties for productive uses.

Communitywide Composting

Many communities offer free composting as a benefit to its residents. Free compost can help to reduce operating costs associated with urban gardens. Compost offered at communitywide compost centers is often the product of county and municipal composting efforts, with leaf litter collected throughout the fall. Delaware County Solid Waste Authority provides compost, free of charge, at the Marple Transfer Station in Broomall. These efforts reduce the amount of organic matter sent to landfills while producing nutrient rich soils. Turning the leaf litter into an asset for the community to use at low to no cost is an extremely effective method of encouraging turning unused lands into productive parcels.

GREEN STREETS

Overview

The term “green streets” is commonly used to refer to streets that specifically emphasize landscaped components within the road right-of-way. Green streets enhance the pedestrian experience and improve open space through the emphasis on environmental quality. Green streets typically have less pavement, more trees, and green stormwater infrastructure incorporated into the design of the street.

When considering green streets, it is important to recognize them as one portion of the larger complete streets concept. A “complete street” is one that emphasizes use of multiple modes of transport, such as walking, biking, driving, and public transit. It encourages these uses through the design of the roadway, which typically includes sidewalks and bicycle lanes along landscaped roadways lined with street trees.

Approach

In Delaware County, 14% of the land is occupied by transportation infrastructure. This includes local roadways, interstate highways, and railroad rights-of-way. Implementing components of green streets

can help to improve the visual appearance of the streetscape and increase valuable green stormwater infrastructure.

There are several different methods by which municipalities can further develop green streets. To be most effective, green streets should be developed in conjunction with other county or municipal goals. Green streets can help to contribute to beautification, economic stability, and reduced stormwater runoff. When encouraging green streets, careful attention should be given to the safety of the end users, including vehicular, pedestrians, and bicyclists. Consultation and coordination with PennDOT and other highway agencies is a vital component of any green streets plan.

Complete Streets

The most comprehensive system for developing green streets is to develop a complete streets plan with green streets considered a key component. As discussed above, a complete streets plan develops guidelines for streets with the specific intent of providing space for a multiple modes of transportation. Common concepts addressed in a complete streets plan include design and sizing of bike lanes, street trees, landscaped medians, and traffic calming devices, such as pedestrian bump-outs. A municipality, or consortium of municipalities and the County, could develop guidelines for green streets as part of a complete streets guideline document. Guidelines should be developed for general design of site amenities, best practices for siting amenities (e.g., distance from street corners, distance from light posts), potential maintenance concerns, and potential points of integration with other projects.

Demonstration Street

A common approach for municipalities that desire to develop green streets is to implement a demonstration project, utilizing a parking lot or residential street, to show what green streets would look like in their town. This frequently helps to alleviate concerns on the part of residents who are unsure of the aesthetics and other effects of green streets. Demonstration areas benefit from significant educational signage that clearly portrays the reasoning behind and goals of the green street demonstration area. Demonstration areas provide the most reach when developed along a high traffic area, such as a main street in an urbanized, town, or neighborhood center. These types of projects help to raise awareness about the benefits of green streets in order to build support for the concept.

Partners

Municipalities can partner with a number of organizations to develop green streets. One of the most popular ways to implement a green streets plan is to work with a business improvement district or chamber of commerce. These organizations often promote landscaping amenities along commercial corridors to improve aesthetics and the experience of visitors. Main Street and Elm Street program organizations are also strong partners for green streets due to their focus on site improvements in areas of urbanized, town, and neighborhood centers.

Green Street Design Components

Green streets can address stormwater concerns by promoting bio-retention and enhancing the aesthetics of the street by softening the edges of the roadways and providing shade. The following are commonly implemented stormwater components used in green streets.

Stormwater Tree Trench

A stormwater tree trench consists of a series of street trees that are connected through an underground infiltration structure. The streets are planted in normal tree pits with the space between them covered with sidewalk, the same as typical street trees. An underground trench runs the length of the sidewalk, and is filled with a structural soil that allows water to pass through, while still supporting the weight of the sidewalk. Stormwater runoff from the adjacent street is directed into an inlet that feeds through the stormwater tree trench, where it infiltrates into the soil and is used by the street trees.

Vegetated Roadside Swale

A vegetated roadside swale is placed adjacent to the roadway, but still within the right-of-way, often in areas with no sidewalk. The top of the growing medium is below the elevation of the roadway, with no curb between the swale and the road. This allows the stormwater runoff to flow freely into the swale where it infiltrates into the soil. On roadways with sidewalks, a roadside swale can be placed on the street side of the curb if the road is wide enough, without disturbing the sidewalk. When placed on roads with sidewalks vegetated swales are often narrower than three feet wide.

Permeable Pavements

Permeable pavement refers to pavement systems that allow water to infiltrate through the subgrade and into the soil below. There are several main types of permeable pavements: pervious asphalt, pervious concrete, and permeable pavers. Pervious asphalt and pervious concrete both function very similarly. The mixes of stone and binding compounds used to create these leave small void spaces throughout the depth of the material which allow water to pass through. With permeable paver blocks water passes through the void spaces between the individual pavers and into the soil below. These types of pavers do not use any grout material and are set on a compacted material that remains porous.

Stormwater Planter (Rain Garden)

Stormwater planters are typically found along sidewalks or in parking lots. They are often rectangular in shape, paralleling the roadway along the sidewalk. Stormwater is directed into the planter through curb cuts or a storm inlet, and infiltrates into the specialized planter. The planter is filled with stone, soil, and planting specifically selected for infiltrating water at the particular site.

Stormwater Bump-out

One of the most popular green stormwater infrastructure techniques is the stormwater bump-out. A bump-out is an extension of the curb into the street, typically near an intersection. The space created is filled with stone, soil, and vegetation, similar to the stormwater planter discussed above. Stormwater runoff from the roadway is directed into the bump-out through a curb-cut, or a designated storm inlet. The stormwater in the bump-out then infiltrates into the soil.

Stormwater Tree

A stormwater tree is one planted in a pit along the street edge, with the top of the growing medium slightly below the elevation of the street. A curb cut, or other type of inlet, provides a direct path into the pit for stormwater runoff from the roadway. Along with a tree, the pit can be planted with low growing vegetation to support bioretention.

FUNDING

The protection of open space, natural features, and recreational services and facilities outlined in this plan will require a significant amount of funding. Many of the Plan's actions require money for land conservation, the procurement of easements, and the development of trails. No single source of funding will meet the needs, goals, and objectives of a community. Most grant programs require a match or stand a better chance of receiving a grant award if the project involves a partnership.

For these reasons, implementation of the plan will rely on multiple sources of funding and multiple partners. Funding is briefly described in the following three sections: municipal budgeting, bonds and dedicated taxes for parks and open space, and grants. The sections outline the many ways that governments can fund park operation, maintenance, improvements, and programs, as well as partner with others to lower costs and increase capacity. A park and recreation department can be funded many ways, and no one combination of methods is right for all communities. (Note that techniques for funding for recreation programming were discussed in more detail in Chapter 5, and fee-in-lieu ordinances were described earlier in this chapter).

BUDGETING

The first step a municipality can take to establish a basis and capacity for public open space and recreation programming funding is to create a budget. The two subsections of a recreation and parks budget are the operating budget and the capital budget.

An operating budget is a plan to allocate the funds and estimate the income to finance day to day operation during the upcoming year. This includes elements such as wages and salaries, utility costs, postage, supplies, and other regularly recurring expenses.

A capital budget identifies, prioritizes, and finances expensive projects, including parkland acquisition, construction of new recreation facilities, purchase of new equipment, and major repairs or replacement of existing facilities and equipment. Capital projects are nonrecurring high-cost expenditures with multi-year impacts.

There are also different methods for maintaining the budget and directing funds throughout the year. The two budgeting methods that most recreation and parks departments use are fixed allocation budgets and variable expense budgets. Fixed allocation budgets allocate funds at the beginning of the year and do not change them. Revenue generated goes back into the general fund and not into individual departments (like parks and recreation) to spend. Variable expense budgets tie expenses to the amount of income generated. If revenue is less than anticipated, expenses must be reduced. Income and expenses are tracked closely to meet budget goals. This budgeting system is common in recreation and parks agencies that must generate their operating income and rely on a variety of revenue sources.

Outside of tax dollars from the general fund, revenue that is generated internally through parks and recreation (i.e., parks fees like program or activity fees, facility use, parking) or impact fees (e.g., developers' fee-in-lieu of dedication of open space) should be accounted for carefully in the budget. A written revenue policy is essential to establish a framework for fees and charges that make sense in a particular community. The revenue policy is based on factors like average income level and demand for services, the cost to maintain facilities, and the municipality's philosophy regarding generating revenue. Some types of recreational facilities are revenue generating by their very nature. A few examples

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include large sports complexes, indoor recreation centers, marinas and boating facilities, golf courses, swimming pools, and street/in-line hockey rinks.

There are many other ways that governments can creatively sharpen the skills of professional staff, tap community resources, and create partnerships in order to do more with less. For more details on budgeting, revenue generating, as well as using volunteers, foundations, and friends groups, financing capital projects, business sponsorships, and more, please see DCNR's 2005 publication "Financing Municipal Recreation and Parks."

BONDS AND DEDICATED TAXES FOR PARKS AND OPEN SPACE

In addition to budgeted money from the municipal general fund or parks department-generated revenue, there are a number of other initiatives that can provide funding for open space, recreation, and greenways programs. When large amounts of money are needed immediately or to build up a fund for an anticipated expense, bonds or special taxes are options that have been used to great effect in Pennsylvania.

Bond and Tax Referenda

State statutes limit the amount of debt a local government can incur. Under the Local Government Debt Act (Title 53, Part VII, Subpart B, Chapter 80), the debt limit is 250% of a municipality's borrowing base (average annual revenue over the last three years). Property tax rates are regulated by municipal codes. The Local Tax Enabling Act (P.L.1257, No. 511) sets the earned income tax rate at 1.0% unless voters approve a higher rate. If proposed financing does not put a local government over its statutory debt or tax limits, there is no need for a referendum. If the limits are exceeded, then a public referendum is required. If the municipal government anticipates incurring additional debt or raising taxes in the future, a referendum may still be desirable even if not required (Gordon, 2008).

Taking on debt to acquire bonds is a proven and effective way to finance open space and greenways project. A variety of different types of bond options are available to municipalities. Regardless of the type of bond referendum, an education and awareness program should be implemented to increase public and support in advance of any vote.

Revenue Bonds

Revenue bonds are a type of bond that can be used to fund a recreation facility or program that requires a large up-front cost, but can be paid for over time with municipal revenue generated in subsequent years. They are secured by a guarantee of repayment exclusively from revenues generated from a specific local government activity. In the issue statement that is taken to a vote, the government entity issuing the bond pledges to generate sufficient revenue annually to cover the new program's operating costs, plus meet the annual debt service requirements (principal and interest payments).

General Obligation Bonds

Local governments are commonly able to issue general obligation bonds. These are bonds that are secured by the full trust and credit of the municipality. In this case, the local government issuing the bonds pledges the use of any sources of its revenue (like raising taxes, for instance) to generate sufficient revenues to make the debt service payments on the bonds. A general obligation pledge is sturdier and more sound than a revenue bond. This typically means that the interest rate will be lower than a revenue bond would be.

Property, Real Estate, and Earned Income Taxes

Under Act 153 of 1996, two different taxation tools, property tax and earned income tax, were identified as means to purchase open space land or development rights. The Act amended the Pennsylvania Conservation and Land Development Act, expanding the authority of municipalities to acquire open space interests for a variety of purposes. Under the Act, two taxation tools, property tax and earned income tax were identified as ways to fund the purchase development rights or open space land. An additional type of tax that can be used for open space is real estate transfer tax.

Act 153 requires that revenue from property tax or earned income tax be used to retire debt incurred in the purchase of open space properties or interests or to make new property acquisitions, which will secure an "open space benefit" in following with the Conservation and Land Development Act. These taxes may only be levied following referendum approval from the voters.

Property Tax

Property tax is charged to property owners based on a percentage of the assessed property value, and is usually measured in millage ("mills"), where 1 mill equals \$1 of tax for every \$1,000 of assessed property value. The tax should not to exceed the millage authorized by voter referendum. Although property taxes provide a steady source of revenue, their use to fund open space activities may inhibit the ability of the municipality to raise money for other needed activities. This is due to the limits of the total level of the millage rate. Chadds Ford Township has used this type of tax to help fund its open space program.

Earned Income Tax

Act 153 of 1996 allows the use of a referendum authorizing voters to approve the levy of an increased earned income tax beyond the 1.0 percent Pennsylvania cap. This rule allows this exception solely for the purpose of purchasing open space. Earned income tax is applied only to earned income, and not to assets or pensions. This funding method may be more acceptable and popular in municipalities with a higher percentage of retired senior citizens.

Real Estate Transfer Tax

This is a tax levied on properties at the time of sale and is usually divided between the buyer and seller. Although it can generate significant funding for open space and greenways, it is also an unpredictable revenue stream because it is based on real estate market conditions, which can fluctuate. Radnor Township has used this type of tax to generate revenues for open space acquisition.

GRANTS

There are many potential sources of grant funding for open space, parks, and greenway projects. The most popular funding source is the DCNR Community Conservation Partnership Program (C2P2), which brings together a number of streams of money into one application program. With some exceptions, C2P2 grants generally cover 50% of the budget for a variety of project types including planning, land acquisition, park development, trails, and partnerships.

One of the services that the DCNR Bureau of Recreation and Conservation (BRC) provides is a Funding Resources section on their website at:

<http://www.dcnr.state.pa.us/brc/elibrary/resourcesta/funding/index.htm>

DCNR not only offers technical support for applications to their own grant program, it also provides information concerning other sources of funding, which may or may not be used to match a C2P2 grant. Two publications currently available at the web address above that are worth viewing are:

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- Funding Guide for Recreation and Conservation (DCNR BRC, 2014)
- Finding the Green: A Guide to State Funding Opportunities for Conservation, Recreation and Preservation Projects (Pennsylvania Growing Greener Coalition, 2014)

The above funding guides were compiled for statewide usage. As funding programs change, the content of DCNR's website and funding guides will likely be updated. Keep in mind, the use of these and other written guides is not a substitute for speaking with the regional advisor about a specific project idea.

Below is a list of grants and other funding sources which are applicable in Delaware County and its municipalities. These sources are for projects relating to open space, parks, recreation, greenway, environmental education, and environmental stewardship projects for which municipalities are eligible applicants, unless otherwise noted. While this list is long, it is not exhaustive and will be outdated not long after this plan is first printed, since programs end and new ones are established every year.

Other organizations, both public and private, also offer funding for specific types of projects. The funding, project eligibility, and match requirement vary from year to year. For more information on the programs listed, and the criteria and contact information as of January 2015, see Appendix I-M.

Federal Grants

- Federal Transportation Alternatives Program (TAP)
- National Fish Passage Program Grants
- National Park Service – Rivers, Trails, and Conservation
- Public Works Grants
- Hazard Mitigation Grant Program

United States Environmental Protection Agency (EPA) Grants:

- Targeted Watershed Grants Program
- Brownfields Cleanup Grants
- Clean Water State Revolving Fund
- Environmental Education Grants

Pennsylvania Grant Programs

PA Department of Community and Economic Development (DCED):

- Multimodal Transportation Fund
- Commonwealth Financing Agency (CFA) Grants:*
- Greenways, Trails and Recreation Program (GTRP)
 - Marcellus Legacy Fund, Watershed Restoration Protection (WRPP)

Department of Conservation and Natural Resources (DCNR) Grant Programs:

- DCNR Community Conservation Partnerships Program Grants (C2P2)
- DCNR TreeVitalize Program Grants

Department of Environmental Protection (DEP) Grants:

- DEP Coastal Zone Grants
- DEP Environmental Education Grant Program
- DEP Growing Greener Program Watershed Grants

PA Department of Transportation (PennDOT):

- Multimodal Transportation Fund

PENNVEST (Pennsylvania Infrastructure Investment Authority) Grants:

- Green Initiatives
- Non-Point Source Projects

Pennsylvania Fish and Boat Commission (PFBC):

- Boating Infrastructure Grant Program

Pennsylvania Historic and Museum Commission (PHMC) Grants:

- PHMC Certified Local Government Grant Program
- PHMC Keystone Historic Preservation Project Grants

Delaware Valley Regional Planning Commission Funding Programs

- Congestion Mitigation and Air Quality (CMAQ) Program
- DVRPC Regional Trails Program

Non-Governmental Grants (Corporate, Foundation, and Other)

- Do GOOD Outdoors
- Joint Use Playground Grants
- Keep America Beautiful (KAB) Grants
- The Lorrie Otto Seeds for Education Grant Program
- PECO Green Region Grants Program
- Public Lands Every Day - Every Day Event Grants
- PeopleForBikes Community Grant Program
- Robert Wood Johnson Foundation
- Scotts Miracle-Gro - GRO1000 Grassroots Grants
- Tony Hawk Foundation Skateboard Park Grants
- Water Resources Education Network (WREN) Grants
- Wells Fargo Grants
- William Penn Foundation Grants

ACTIONS:

Objective

OS 5 Implement the actions of the Open Space, Recreation, and Greenway Plan to conserve, enhance, and connect the County’s open space network.

Actions

Delaware County will...

- OS 5.1** Provide technical assistance to municipalities in developing municipal comprehensive and open space plans.
- OS 5.2** Provide technical assistance to municipalities in identifying parcels for open space acquisition.
- OS 5.3** Steward County-owned lands to conserve and enhance the natural features.
- OS 5.4** Provide technical assistance to municipalities in developing green streets programs.
- OS 5.5** Use the Countywide Greenway Plan (Volume II) to develop a countywide network of trails and open space.
- OS 5.6** Use the County Parks and Recreation Plan (Volume III) to guide future decision making for recreational programs and facilities for County Parks.

Municipalities are encouraged to...

- OS 5.7** Adopt zoning and subdivision and land development ordinances which protect sensitive natural features.
- OS 5.8** Promote private landowner conservation through incentive programs and easements.
- OS 5.9** Steward municipally-owned lands to conserve and enhance the natural features.
- OS 5.10** Use the Delaware County Greenway Plan (Volume II) to help prioritize and plan municipal greenway networks in order to link to adjacent municipalities and help contribute to a countywide greenway network.

